DOCUMENT RESUME

ED 262 723 HE 018 804

TITLE External Studies, 1984. Second Annual Report. Part 1,

General Information and Part 2, Statistical

Information.

INSTITUTION Western Australia Post Secondary Education

Commission, Nedlands.

PUB DATE Aug 85

NOTE 79p.; Pages 33-36 contain small print.

PUB TYPE Statistical Data (110) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.

DESCRIPTORS *College Programs; College Students; Communications

Satellites; *Distance Education; *Enrollment Trends;

*Extension Education; *Foreign Countries; Postsecondary Education; *Telecommunications;

Teleconferencing

IDENTIFIERS *Australia (Western Australia)

ABSTRACT

The use of telecommunications and satellite technology in external studies programs at colleges and universities in Western Australia is described, and statistics on programs and courses available in the external mode are provided. Reports on new teaching developments are provided for the following institutions: Murdoch University; the University of Western Australia; the Western Australian Institute of Technology; the Western Australian College of Advanced Education; the Technical Extension Service; and the regional colleges (Hedland College; Kalgoorlie College; and Karratha College). Important organizational and operational developments are noted, including plans for a national interinstitutional telecommunications network, operational trials of FM subcarrier technology for distance education, and teleconferencing sessions on distance education issues. Data are provided by institution on: student enrollments by age and mode of study; enrollments by address of home location and mode of study; and enrollments by mode and field of study. For each institution and field of study, information is presented on courses that are available externally. (SW)



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EXTERNAL STUDIES 1984

Part 1

General Information

Second Annual Report of the External Studies Review Group

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- EXTERNAL STUDIES REPORT 1984 -

Part 1

GENERAL INFORMATION

Second Annual Report of the External Studies Review Group

NOTE: Statistical information and details of courses available in the external mode are provided in Part 2 of the Report.

August 1985

ISBN 0 7244 6503 0 (Set) ISBN 0 7244 6506 5 (Part 1)



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INTRODUCTION

The External Studies Review Group has agreed that its annual reports, as well as outlining developments in external studies during the year, should focus on a particular area of interest. The focus in this, the second annual report, is on telecommunications and satellite technology. Subsequent reports will focus on issues such as credit transfer and the role of the regional colleges with respect to external studies.

External studies in award courses are provided by four institutions in Western Australia: Murdoch University, the Western Australian Institute of Technology, the Western Australian College of Advanced Education and the Technical Extension Service of the Technical Education Division. The University of Western Australia does not offer external studies but has transfer arrangements with Murdoch University for students wishing to use this mode of study.

The provision of external studies is supported throughout the State by regional and TAFE colleges at various country centres. These colleges offer a number of services to students resident in their areas, who are enrolled as external students elsewhere. These colleges also offer some advanced education courses through contracting arrangements with metropolitan institutions for students who live in their regions and who prefer this as an alternative to studying in the external mode.

The External Studies Review Group is aware of the recent WAPSEC report on credit transfer and will be considering its implications for external studies during the coming year.

Members hope that the comments contained in this report will be of use to both the Western Australian Post Secondary Education Commission (WAPSEC) and the Commonwealth Tertiary Education Commission (CTEC) in planning for the provision of external studies in WA and throughout Australia.



NEW TEACHING DEVELOPMENTS

Murdoch University

The "integrated" model of two-mode teaching adopted at Murdoch University is based upon the objective of providing all students with the same courses taught to the same standards by the same academic staff, whether taken "on" or "off" campus. This basic principle not only ensures academic parity but also facilitates students' movement between the "internal" and "external" modes as their individual circumstances demand. In order to ensure this flexibility, the University must develop and maintain a wide range of course units in the external mode so as to enable students to proceed right through to graduation by distance education, rather than being required to move to on-campus study to complete their higher level course units. Provision of full degree courses, or programs, entirely in the external mode has been a critical factor in establishing external study at Murdoch as a viable alternative rather than merely a substitute form of tertiary educational provision. As long as course delivery is confined to mailed print and audio-visual materials, a wide range of course offerings is quite appropriate. As and when the use of broadcast media, and more particularly, television, is contemplated, the obvious lack of economies of scale in individual course units presents a severe constraint. One of the major challenges facing the University is therefore to find ways of enhancing students learning at a distance by increasing the use of communications technologies, whilst avoiding the severe cost penalties involved in the production and transmission of external course materials through the "big media".

As foreshadowed in the 1983 report, Murdoch University has introduced two new undergraduate programs and three graduate diplomas in 1984 with a very economical net increase of only 15 course units.

Emphasis has been placed on encouraging the production of course units which serve the needs of more than one award program and on reinforcing systems for rotating the presentation of pairs of complementary course units between alternate years.

There has been considerable interest in assessing and trialing applications of new communications technologies. Initial steps have been taken to establish "dialup" facilities through which off-campus students may access the University's mainframe computer to enhance the versatility of loaned or self-owned micro-computers. Video cassettes were introduced



on a limited basis. Staff of the School of Social Inquiry, Educational Services and Teaching Resources and the External Studies Unit were also heavily involved in the development and implementation of the first Australian operational trials of FM radio sub-carrier 'narrowcasting' through 6UVS (FM) Universities Radio Ltd. (Further details are included in the section of this report devoted to Telecommunications and Satellite Technology).

In 1985 Murdoch University will introduce both uncergraduate degree and postgraduate diploma programs in Computing for completion in both the internal and external modes. The existing master's degree by coursework in Literature and Communication will be complemented by the introduction of a bachelor's degree in Literature and Communication in the external mode only. A major innovation in 1985 is an undergraduate degree program in Women's Studies through which students will be able to complete a Murdoch degree including core courses taken from both Queensland and Deakin Universities by distance education.

Murdoch is currently involved in discussions with the four other major providers of University external studies with the object of building on the base established in Womens Studies so as to provide for and to encourage wider inter-University enrolment in the external mode.



University of Western Australia

Social Issues in Modern Drama

University Extension offers four large and comprehensive community education programs each year including the University of Western Australia's Annual Summer School. Staff from Murdoch University and the Western Australian Institute of Technology provided a significant contribution to the success and diversity of the community course provision. In addition, University Extension provides professional and administrative support for the development of continuing education programs for University faculties and departments and training and development courses for other external agencies.

Off-campus community courses were offered at Geraldton and Wanneroo and the Canning Vale Prisons complex and in 1984, for the first time, nine non-award courses were offered in the external mode in University Extension's Spring Community Education program:

Practising Academic Skills Successfully

Australian Political Systems

Women in Australian Society

Soil Conservation

The Young Handicapped Child

Accounting 1

Marketing Techniques: An Introduction to Decision Making in Marketing

Understanding Economics

These courses were franchised from the Darling Downs Institute of Advanced Education and enrolments have been sufficiently encouraging to warrant the continuation of this initiative in 1985.

A print-supported community course, "The First Years of Life" was presented through 6UVS (FM) Universities Radio Ltd. and in collaboration with Murdoch University during the latter's Australian operational trials of FM sub-carrier technology.



University Extension continued its involvement with satellite communications through the "University uses of satellites" project conducted by Dr James Lange, postdoctoral research fellow from the University of Guam. Regular consultation, and a weekly teleconference via University Extension's ATS-1 satellite maintained contact with educators and administrators throughout Australia, New Zealand and the Pacific basin nations, and with other user groups such as the Royal Flying Doctor Service, Aboriginal communities and emergency services. The results of these activities and research have led to a preliminary cost/benefit analysis of telecommunications networks for Australian education which will be presented as a final report of the "University uses of satellites" project. (See the section on Telecommunications and Satellite Technology for further details of FM sub-carrier and telecommunications developments).



The Western Australian Institute of Technology

In 1984 external studies at WAIT was opened to all students, whereas previously only disadvantaged students had been able to study externally. All students may now elect to study externally if the unit of study is available in the external mode. No great increase in numbers was experienced in 1984. However, this change in policy is expected to have an effect on numbers for 1985.

The number of units to be offered in 1985 has increased to 330. Many units have been reviewed throughout 1984 with special attention being given to first year units in Social Sciences. New units in the Bachelor of Applied Science (Library & Information Studies), Bachelor of Applied Science (Nursing) and Bachelor of Business degrees will be available in 1985.

The review of and improvement of quality in existing course materials is to be a priority for 1985. The review is to concentrate on both contest and presentation of course materials.

After twelve years' service, November 30, 1984 saw the retirement of the Head of the Department, Mr George Idle. His replacement, Dr John Walsh, has been a long-time WAIT staff member holding various academic and administrative positions. Dr Walsh sees his role within the Department as one of consolidation of existing work by updating of material, of extension of offerings, of introduction of the satellite as a means of communicating with external students and finally of research to establish an even better knowledge of the needs of external students.

Several staffing changes within the Department are not expected to alter the Department's already proven efficient operations.

Country centres have played a large role in external studies in recent years and the continued support of the staff in these centres is greatly appreciated. Greater liaison with country centres is expected from 1985, with academic and administrative staff from WAIT visiting more frequently to assist and guide both staff and students in country centres.

Research is currently being undertaken to improve facilities for students, with the possibility of students being able to access information from both the Robertson Library and Computing Centre direct.



Interactive tutorial sessions with country students using the ATS-1 satellite have proved beneficial to both staff and students. It is planned to continue these sessions and, where possible, increase participation in 1985.

A pilot program operating between Bentley and Bunbury using the Excom 100 (Cyclops) will commence in March, extending our participation in technology to computers. The Excom 100 was purchased with the aim of assisting in visual work, with both lecturer and students being able to type or draw simultaneously. The Excom 100 has many possibilities, not only for external studies but also for other departments on the WAIT campus.

WAIT will continue to explore the development and applications of these new systems to improve opportunities for external studies.

During the year WAIT enrolled 192 Extension Students in a wide range of units covering the various Schools of the Institute. This included students undertaking short refresher courses in a particular profession, as well as those studying for personal development and cultural enrichment. These enrolments extended across the whole State.



Western Australian College of Advanced Education

The Extension Service of the WA College has continued to serve as the centre of all off-campus instruction for students studying in the external mode as well as offering a wide range of community-oriented courses and activities which are self-supporting.

The external studies component of the Extension Service offered eleven courses in 1984, nine of which were available fully in the external mode. Approximately 220 discrete units were available to in excess of 1500 students who were enrolled at some time during the year.

The Extension Service has had a major task in 1984 revising existing units and preparing for the influx of a large number of units to be offered for the first time in 1985 consequent upon the restructuring of teacher education courses by the College. Furthermore, a new course at the associate diploma (UG3) level was mounted in the area of Community Languages in Portuguese and Vietnamese. This course is unique in Australia and has been well received by students studying externally.

The enclave in Broome, which caters mainly for Aboriginal students who wish to train as teachers, has continued to flourish with further Diploma of Teaching units being prepared. The College is also involved with an extension of this project at Carnarvon in 1985.

In the last quarter of the year, the Extension Service took advantage of the ATS-1 satellite to hold two interactive audio-seminars with students undertaking core units in the Bachelor of Education course. A further pilot activity was undertaken in conjunction with the Golden West network by providing a one-way video presentation involving three programs concerned with a core unit in the Bachelor of Education course.

In order to obtain some idea of students' perceptions of the Extension Service and its activities, a questionnaire was sent to all re-enrolled students covering such broad aspects as reasons for undertaking courses, advantages and disadvantages of studying in the external mode, communication difficulties and counselling, support services and usefulness of materials. Approximately 25 per cent of students responded and a report was circulated throughout the College.



At the end of 1984 the Extension Service was given the responsibility for co-ordinating all administrative and procedural aspects of courses contracted with other institutions. Both Hedland and Kalgoorlie Colleges taught units on behalf of the WA College and a further two institutions will become involved in 1985.

The Community programs run by the Extension Service cover a wide range of community interests including a locally certificated course for teacher-aides. In 1984 the College offered in excess of 150 courses involving nearly 3 000 participants.



<u>Technical</u> Extension Service

Although the major activity of Technical Extension Service remains the servicing of 16 000 subject enrolments and maintenance of the 600 subjects on offer, there has been considerable expansion in other areas of activity, including research into specific aspects of external studies and the continued development of the rapid response systems for the design of instructional materials.

One significant piece of research has been an investigation into the reasons why a substantial number of students enrol, but fail to submit any work. The results of a computer analysis of the responses to questionnaires are expected to be made available to other external studies institutions within the next few months. It is anticipated that the current project will be followed up with a number of other research projects designed to improve our understanding of the sort of people who enrol in TAFE courses and the factors promoting the successful undertaking of studies.

The rapid response model for the design of instructional materials has been under development for a number of years and, in 1984, it proved to be most effective in meeting the demands made by syllabus changes in a number of study areas. As a result, TAFE was able to continue to offer, in the external mode, courses which would otherwise have had to be suspended pending updating of the syllabus teaching materials. It is anticipated that, with the recent installation of the Wordplex 8000 word processor at Technical Extension Service, and the development of a computerized catalogue of instructional modules, the capability of Technical Extension Service to provide learning materials, as and when required, will be further enhanced.

In addition to improvements in the development of materials, there has been some work done on new delivery strategies, and on the evaluation of student services. However, these projects are still in the very early stages and it is not likely that any information will be available until early 1986.

In 1984, the TAFE Country Network was established, and its scale of operation has grown, slowly but steadily. Previously this operated as the Technical Extension Service Country Agency scheme. The network scheme is based upon the notion of a Rural Co-ordinator being appointed



to act as a resource person for a particular country region. In consultation with the community being served, the Rural Co-ordinator identifies the need for particular education programs. An appropriate response is arranged which may be face-to-face or external tuition depending on demand and available resources. In 1985 three new centres will join the network. These are the TAFE centres at Manjimup, Kellerberrin and Kununurra. The total number of participating centres will then be 13.

In order to meet the needs of the Network for information, and as part of its contribution to the general operation, Technical Extension Service has become a service provider on Telecom's Viatel Service (a public access view data service). It has also made available, to some of the smaller and more remote members of the network, the Duct teleconference units which were designed by the South Australian Education Department, and which have proved highly effective, both from a technological point of view and also in providing a cost-effective service to remote students.

In addition to its connections with the TAFE Country Network, Technical Extension Service is also involved in the development of the national TAFE External Studies Network. As a contribution to this network, the Technical Extension Service has undertaken to publish all new course materials in either hard copy or digital form, and to make the digital stored materials available either on floppy discs, or by direct transmission through Telecom services to compatible terminals anywhere in Australia.

The national network is also working on the establishment of consortium and bureau arrangements for the development, production and tutoring of selected external courses. A number of agreements have been entered into and it is anticipated that the first courses will be on offer by the end of 1985.



The following non-award subjects were offered externally by the Technical Extension Service in 1984:

Artificial Flower Making

Drama Practical

Dressmaking Elementary

Dressmaking Practical Home

Freelance Journalism

General Drawing 1

General Drawing 2

Home Decoration

Home Management

Interior Decoration (Planning Your House)

Interior Decoration (Decorating Your Home)

Interior Decoration (Introduction to Antique Furniture)

Interior Decoration (Arranging Your Furniture)

Landscape Sketching

Landscape Sketching (Advanced)

Leatherwork

Lettering

Macrame

Oil Painting

Pottery

Short Story Writing

Short Story Writing (Advanced)

Soft Furnishings

Watercolour Techniques (Landscape)

Watercolour Techniques (Advanced)

Adult Literacy

Air Conditioning Principles

Cake Decorating 1P

Food and Nutrition

Health

Introduction to Creative Writing

Justice of Peace Course

Mathematics Remedial

Noise Control for Businessmen

Small Craft Navigation

Small Craft Seamanship



Reference has already been made to the contribution made by the regional colleges in providing support services to students resident in their regions who are undertaking external studies through metropolitan institutions. These colleges were invited to contribute to this annual report, and their comments are set out below.

Time did not allow for the views expressed by the regional colleges to be discussed with the External Studies Review Group prior to the preparation of this report. However, a number of issues of mutual concern will be discussed during 1985 and the outcome of these exchanges will be included in a subsequent annual report.

<u>Hedland College</u>

In 1984, the College extended its services to the small communities of the Eastern Corridor, with the establishment of Centres and appointment of part-time co-ordinators in Telfer, Shay Gap and Goldsworthy. Arrangements were completed with Mt Newman Mining to establish a Centre at the Redmont Line Camp, using the services of a company employee as the College representative. This leaves Marble Bar as the remaining Centre to be developed in 1985.

Each Centre is, or will be, equipped with the following resources aimed at promoting the furthering of education through external studies:

- a collection of books and reference material to help students locate appropriate courses;
- a microfiche reader and copy of the College's catalogue, along with links with library resources through the services of the part-time co-ordinator.

Similar facilities also exist in the major Centre at Newman.

The College has also adopted a philosophy in course design and selection of favouring subjects and courses supported by external studies.

The following courses have been made available through the College, based on their availability in distance learning programs:

 Bachelor of Applied Science (Nursing) (WAIT) - students enrol externally with WAIT and are supplied tutorial assistance through the College.
 This is supplemented by one or two workshops per semester conducted



by WAIT staff. Unfortunately there are two problems associated with this program. Only the first year of the two-year conversion program is available externally at present and WAIT is not enthusiastic about continuing with the 1984 type of delivery - essentially because of a lack of resources. The options WAIT wishes to offer to candidates for this course are: either to undertake external studies exclusively, with attendance at WAIT for workshops; or to study at the local institution, which will assume complete responsibility for the delivery of the program. In the latter case WAIT would provide course materials and semester assignment topics and the local lecturer would teach the program and mark the assignments during the semester. WAIT staff would mark the end of semester papers. The problem this poses for Colleges is the recruitment of acceptable staff. There are people available who can tutor in a program but who are not always acceptable when total responsibility is required.

- Associate Diploma in Engineering (Darling Downs Institute of Advanced Education) - students again enrol externally and receive tutorial support throughout the year from the College. This is supplemented by a residential week held at the College annually and run by College staff. This gives students exemption from the requirement to attend the parent institution.
- Bachelor of Arts (Murdoch University) selected first year units have been arranged for delivery in Hedland in a "core" format that will permit study in later years in four different areas. The first of the units will be undertaken in 1985. For the present, students will enrol externally. A later development is expected to be full, local teaching of the selected units.
- Bachelor of Business (WAIT) the first year of this program is offered as a fully taught program on contract. It was selected as the most appropriate business program for Hedland College to offer because students could complete the two remaining years through external studies should they be long-term residents in the area.

The centres for which the College is responsible have small populations. The potential number of students is therefore small. To make class sizes viable only two or three units are offered per semester in most programs. Thus the units to be offered over the subsequent three or more years need to be widely known in the community so that potential



students can take full advantage of them when planning their courses. In this situation, the role of the parent institution's external studies program is to make available units to those students who can handle more units than the College is offering, or to offer a choice of modes for those who prefer distance education. Some students may need to repeat a unit before it next becomes available under the College's cycle of offerings. Metropolitan external studies units thus complement the activities of the provincial Colleges.

Kalgoorlie College

There is no doubt that external studies provides a very important, alternative, study mode to students in country regions. However, sufficient attention has not been given to the support of such students using the resources and facilities of centres such as Kalgoorlie College. Currently the College has a fairly informal relationship with the Technical Extension Service and Murdoch University to provide "support" for their students, but this support structure should be and could be significantly strengthened. As with the contracting arrangements with Perth-based institutions, there should be some provision for "contracting" to service the needs of external students; this implies, of course, some funding allocation to the regional colleges in accordance with some predetermined "formula". The College would be delighted to be a formal "study" centre for external students and would provide tutorial support and access to equipment on some short, residential, basis if the necessary funding could be provided.

The people of the Kalgoorlie region should have access to any course offered in the external mode, irrespective of whether it comes from this State or not. To achieve this it may be necessary to convince CTEC that some alternative funding arrangement should be made, so that Colleges providing services can be funded directly on the basis of "enrolled" service students, rather than the present system where any funding must come from the institution granting the award. With the advent of AUSSAT, the problems relating to the servicing of students could be increased and perhaps we should be looking at some formal mechanism for funding allocations along the lines developed by WAPSEC for contracting.



Karratha College

Karratha College has been examining the means by which it may be able to provide constructive support for students living in its region and who are studying in the external mode from other institutions. Three needs have been identified to assist the College to provide this support:

- the need for t are numbers and names of people from the region who are doing external studies to be provided to the College;
- the need for a system for delivering tutorial assistance for these people;
- the need for adequate library and resource support within the regional college.

In establishing a tutorial system there is a need to find some means of recompense for the College so that tutorial support can be allocated on a regular but flexible basis and not fitted in in staff spare time. Some formal system of recompense also would allow regional colleges to provide practical experiences (for example, in computing courses) for external students, thus enhancing the quality and flexibility of such courses. The Murdoch external studies tutoring model is one under consideration.



TELECOMMUNICATIONS AND SATELLITE TECHNOLOGY

The need for close collaboration between educational sectors and between educational institutions in planning and developing the uses of communications technology was recognised in 1979 with the establishment of the WA Satellite Educational Advisory Group (WASEAG). Over the past five years, this informal group has provided a forum for the exchange of information, for publication and dissemination of ideas and for ensuring that those working on the educational applications of satellite technology received support and practical assistance.

Other committees involving representation of tertiary institutions have been the WA Government Communications Centre and the National Working Party on Telecommunications for Tertiary Education.

In 1984 there have been further important organisational and operational developments.

The Inter-Institutional Committee on Educational Telecommunications

The four tertiary institutions in WA, working through the agency of the Tertiary Institutions Service Centre, have appointed a Telecommunications Coordinator, Dr James Lange, with a brief to facilitate co-operative projects in educational telecommunications.

Through Dr Lange's initiative this Committee has been involved in the planning and initial implementation of two important collaborative ventures.

<u>Plans for the Introduction of a National Inter-Institutional</u> Telecommunications Network

It is proposed that in 1985 a number of educational institutions throughout Australia will install the equipment necessary to conduct group audio teleconferencing and facsimile exchange. Some institutions may be in a position to go further and include provision for videoconferencing. Experience using such a system with terrestrial links in 1985 will establish whether the post-secondary education institutions can justify setting up a dedicated satellite-based network for future use in the exchange of teaching, research and administrative material.



Educational Television via Golden West Network

An experiment in educational TV broadcasting (ED-TV) was established under the sponsorship of the Golden West Network operating out of its Bunbury studios. Program material was provided by the Audio-Visual branch of the Education Department for school children, by TAFE and by WAIT, WACAE and UWA. The Federal Government's announcement on 10 October 1984 that commercial television for outback areas will be provided by regional TV interests emphasised the importance of this experiment.

FM Radio Sub-Carrier Use for Distance Education

Murdoch University received a grant from the Commonwealth/State Advisory Committee on the Educational Use of Communications Technology to conduct the first Australian operational trials of FM sub-carrier technology through 6UVS (FM) Universities Radio Ltd.

Working in collaboration with University of Western Australia Extension, staff of Murdoch University established a system whereby tuition was "narrowcast" from the University's audio-studio through the 6WS transmitter to decoder receivers established in individual students' homes and other institutional locations. Feedback from students to tutor was provided by telephone and conversation between an individual student and the studio-based academic staff was renarrowcast for all tutorial participants to hear and respond to. An educational evaluation of the trials showed that participant students and staff were appreciative and felt that the system had great value in providing for direct course-related interaction for external students. Disadvantages of this technological innovation include the current cost of decoder receivers (approximately \$180-00) and the limited transmission range of 6WS (FM). Advantages include the cost effectiveness of operation, since transmission costs are borne by the mainsignal on which the sub-carrier is "piggybacked" and charges are incurred for only one telephone line at a time by comparison with the multiple costs for lines used in standard tele-conferencing. Murdoch University, with the co-operation of 6UVS(FM) and subject to the authority of the Department of Communications, hopes to continue provision of FM sub-carrier tuition in 1985. It will also be seeking ways of extending the current range of narrowcasting transmissions to serve a greater number of external students.



WAITNet

By the early part of 1984 the Western Australian Institute of Technology had developed a network of ATS-1 terminals located at Albany, Bunbury, Collie, Kalgoorlie and the Perth campus. This approved network was possible through the co-operation and support of the regional colleges and centres at each of these locations.

Tertiary Distance Education or "Kangaroo" Net

A consortium of Australian institutions involved in distance education formed a Tertiary Distance Education Network with the Darwin terminal operating as the main co-ordinator through Dr K Livingston. These institutions have met weekly to participate in a range of teleconferencing sessions on a variety of issues related to distance education. The broadcasts covered inter-institutional conference on study centres, the use of communications technology, administration, servicing students from other institutions, conference planning and special point to point exchanges. The Western Australian Institute of Technology has been quite active in this network with special contributions from the External Studies Unit at Murdoch University for selected sessions.



CONCLUSION

This report has focused on the use of telecommunications and satellite technology which have been developed as co-operative ventures among institutions within the State. The External Studies Review Group welcomes the recently announced establishment by the Commonwealth Tertiary Education Commission of the Standing Committee on External Studies which will, under its terms of reference, examine new technologies which might be further used for on-site and off-campus education.

During 1984, members of the Review Group participated in the WAPSEC seminar on credit transfer which considered possible future courses of action to further open up opportunities for students. It is clear that the needs of external students must be taken into account when credit transfer is examined as a measure of facilitating academic progress, particularly when the problems encountered by that group of students are often greater than those of students based on campus. The Review Group will examine this issue further and monitor developments.

There continues to be a strong spirit of co-operation between niembers of the Review Group and this is reflected in the report of its activities during 1984. The Review Group notes that issues concerning the cost effectiveness of the provision of alternative techniques for the provision of external studies will be considered at a national level by the CTEC Standing Committee and looks forward to the benefits which should be obtained from an appraisal of measures which have already been taken by the various providers of external studies throughout the country. The Review Committee is pleased to record that one of its members has been asked to serve as a member of the CTEC Standing Committee.

The review of existing services and the proposals for future development outlined under the section of this report headed "New Teaching Developments" reflect a commitment to policies which will improve the facilities and opportunities for external students, having regard for their special needs. It is agreed that the provision of services to external students during 1984 has been facilitated by the spirit of mutual co-operation which continues to exist amongst members of the External Studies Review Group.



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EXTERNAL STUDIES 1984

Part 2

Statistical Information

Second Annual Report of the External Studies Review Group



- EXTERNAL STUDIES REPORT 1984 -

Part 2

STATISTICAL INFORMATION

Second Annual Report of the External Studies Review Group

NOTE: General information is provided in Part 1 of the Report.

August 1985

ISBN 0 7244 6503 0 (Set) ISBN 0 7244 6507 3 (Part 2)



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TABLE 1: Student enrolments by age and mode of study, UNIVERSITY AND ADVANCED EDUCATION, WESTERN AUSTRALIA (1984)

Age (a)	Fully External			Mixed Mode			Total		
(Years)	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Un d er 18	24	10	34	5	5	10	29	15	44
18	14	18	32	16	19	35	30	37	67
19	17	9	26	34	55	89	51	64	115
20-29	604	610	1214	260	244	504	864	854	1718
30-39	648	640	1288	154	197	351	802	837	1639
40-49	258	316	574	47	82	129	305	3 9 8	703
Over 49	78	95	173	14	17	31	92	112	204
Not Stated	40	96	136	2	2	4	42	98	140
TOTAL:	1683	1794	3477	532	621	1153	2215	2415	4630

a) Age at 31 December of preceding year

TABLE 2 : Student enrolments by age and mode of study, TECHNICAL EXTENSION SERVICE, PERTH (1984)

Age (a)	Fully External								
(Years)	Males	Females	Persons						
Under 18	562	221	783						
18	232	154	386						
19	169	119	288						
20-29	1 844	888	2 732						
30-39	1 217	630	1 847						
40-49	421	258	679						
Over 49	161	135	296						
TOTAL	4 606	2 405	7 011						

Age (a)	Fully External			Mixed Mode			Total		
(Years)	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Under 18	3	2	5	-	1	1	3	3	6
18	4	7	11	9	6	15	13	13	26
19	4	3	7	18	24	42	22	27	49
20-29	163	182	345	110	93	203	273	2 75	54 8
30-39	218	206	424	49	89	138	267	29 5	56 2
40-49	93	101	194	14	26	40	107	127	234
0 ve r 49	40	49	89	8	9	17	48	5 8	106
Not Stated	-	-	-	-	-	-	-	-	-
TOT AL :	525	55 0	1075	208	248	456	733	798	1531

a) Age at 31 December of preceding year.

TABLE 4: Student enrolments by age and mode of study, WESTERN AUSTRALIAN COLLEGE OF ADVANCED EDUCATION (1984)

Age (a)	Fully External				Mixed Mode			Total		
(Years)	Males	Females	Persons	Males	F emale s	Persons	Males	Females	Persons	
Under 18	-	-	_	-	2	2		2	2	
18	-	-	-	_	2	2	_	2	2	
19	-	-	-	_	_	-	-	_	_	
20-29	165	225	390	7	25	32	172	2 5 0	422	
30-39	138	240	378	16	25	41	154	265	419	
40-49	71	127	198	9	18	27	80	145	225	
0 ver 49	13	17	30	-	_	<u>-</u>	13	17	30	
Not Stated	37	94	131	2	2	4	39	96	135	
TOTAL:	424	703	1127	34	74	108	45 8	777	1235	

a) Age at 31 December of preceding year.



TABLE 5: Student enrolments by age and mode of study, WESTERN AUSTRALIAN INSTITUTE

OF TECHNOLOGY (1984)

Age (a)	Fully External				Mixed Mode			Total		
(Years)	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	
Under 18	21	8	29	5	2	7	26	10	36	
18	10	11	21	7	11	18	17	2 2	39	
19	13	6	19	16	31	47	29	37	66	
20~29	276	203	479	143	126	269	419	329	748	
30-39	292	194	486	89	83	172	381	277	658	
40-49	94	88	182	24	38	62	118	126	244	
Over 49	25	29	54	6	. 8	14	31	37	68	
Not Stated	3	2	5	-	-	-	3	2	5	
TOTAL:	734	541	1275	290	299	589	1024	840	1864	

a) Age at 31 December of preceding year

TABLE 6: Student enrolments by address of home location and mode of study, UNIVERSITY AND ADVANCED EDUCATION (1984)

Address of home location	Fully External				Mixed Mod	le			
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Perth Statistical									
Division	710	719	1429	446	541	987	1156	1260	2416
Rest of WA	582	639	1221	62	61	123	644	700	1344
Oth e r	391	436	827	24	19	43	415	455	870
TOTAL:	1683	1794	3477	532	621	1153	2215	2415	4630



TABLE 7: Student enrolments by address of home location and mode of study, TECHNICAL EXTENSION SERVICE, PERTH (1984)

Address of	Fully External							
home location	Males	Females	Persons					
Perth Metropolitan								
Area	2 210	1 346	3 556					
Rest of W A	2 011	958	2 969					
Interstate	349	94	443					
Other	36	7	43					
TOTAL	4 606	2 405	7 011					

TABLE 8: Student enrolments by address of home location and mode of study, MURDOCH UNIVERSITY (1984)

Address of home	Fully External			Mixed Mode			Total		
location	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Perth Statistical Division	309	2 64	573	200	217	417	509	481	990
Rest of WA	139	175	314	6	2 8	34	145	203	348
Other	77	111	188	2	3	5	79	114	193
TOTAL:	525	550	1075	208	24 8	456	733	798	1531



TABLE 9: Student enrolments by address of home location and mode of study, WESTERN AUSTRALIAN COLLEGE OF ADVANCED EDUCATION (1984)

Address of home	Full y External			Mixed Mode			Total		
location	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Perth Statistical Division	123	254	377	3 0	69	99	153	323	476
Rest of WA	125	240	365	4	2	6	129	242	371
Interstate	89	165	254	-	1	1	89	166	255
Overseas	87	43	130	-	1	1	87	44	131
Not Stat ed	-	1	1	-	1	1	-	2	2
TOTAL:	424	7 03	1127	34	74	108	458	777	1235

TABLE 10: Student enrolments by address of home location and mode of study, WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY (1984)

Address of home	Full y External			Mixed Mode			Total		
location	Males	Females	Persons	Males	F em al e s	Persons	Males	Females	Persons
Perth Statistical Division	278	201	479	216	255	471	494	456	950
Rest of WA	318	224	542	52	31	83	370	255	62 [.] 5
Interstate	103	99	202	8	6	14	111	105	216
Overseas	33	13	46	13	7	20	46	20	66
Not Stated	2	4	6	1	-	1	3	4	7
TOTAL:	734	541	1275	290	299	589	1024	840	1864



TABLE II: Student enrolments by mode and field of study, MURDOCH UNIVERSITY (a) (1984)

Field of study description	Fully External			Mixed Mode			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
General Studies	22	26	48	2	5	7	24	31	55
Arts & Economics	196	220	416	52	101	153	248	321	569
Education	67	145	212	48	78	126	115	223	338
Science(Pure & Applied)	180	72	252	99	49	148	279	121	400
Veterinary Science	-	-	-	1	5	6	1	5	6
Program Choi deferred	ce 1	2	3	1	3	4	2	5	7
UWA Degree	7	15	22	1	2	3	8	17	25
Degree from other Uni.	2	32	34	_	_	-	2	32	34
Not for Degree	29	12	41	1	4	5	30	16	46
TOTAL:	504	524	1028	205	247	452	709	771	1480

⁽a) Post-graduate enrolments not included



TABLE 12 : Student enrolments by mode and field of study, TECHNICAL EXTENSION SERVICE, PERTH (1984)

Fully External						
Males	Females	Persons				
501	229	730				
226	266	492				
17	91	108				
314	6	320				
1 346	1 104	2 450				
1 376	66	1 442				
364	162	526				
118	394	512				
327	15	342				
17	72	89				
	501 226 17 314 1 346 1 376 364 118	501 229 226 266 17 91 314 6 1 346 1 104 1 376 66 364 162 118 394 327 15				

TABLE 13: Student enrolments by mode and field of study, ADVANCED EDUCATION (1984)

Field of study Description	Fu	ıll y Exter	na 1		Mixed Mode			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	
Agriculture	36	10	46	19	8	27	55	18	73	
Archit e cture	27	2	29	1	-	1	28	2	30	
Arts	142	290	432	39	130	169	181	420	601	
Business Studies	388	95	483	135	50	185	523	145	668	
Education	498	7 09	1207	72	120	192	570	829	1399	
Engineering	27	1	28	34	2	36	61	3	64	
H e alth	23	128	151	10	49	59	33	177	210	
Science(Pure & Applied)	17	9	26	11	14	25	28	23	51	
Non-Award	-	-	-	3	-	3	3	-	3	
TOTAL:	1158	1244	2402		373	697	1482	1617	3099	

TABLE 14: Student enrolments by mode and field of study, WESTERN AUSTRALIAN COLLEGE OF ADVANCED EDUCATION (1984)

Field of Study Description		Fully External					Mixed Mod	le	Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons		
Arts	46	77	123	1	8	9	47	85	132		
Business Studies	_	-	-	-	1	1	_	1	1		
Education	371	59 6	967	30	64	94	401	66 0	1061		
H ea lth	7	30	37	-	1	1	7	31	38		
Non-Award	-	~	~	3	-	3	3	-	3		
TOTAL:	424	7 03	1127	34	74	108	458	777	1235		

TABLE 15: Student enrolments by mode and field of study, WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY (1984)

Field of	Fully External				Mixed Mod	e	Total		
Study Description	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Agricultur e	3 6	10	46	19	8	27	55	18	73
Architecture	27	2	29	1	-	1	28	2	30
Arts	96	213	309	38	122	160	134	335	46 9
Busi ne ss Studies	388	95	483	135	49	184	523	144	667
Education	127	113	240	42	56	98	169	169	338
Engineering	27	1	28	34	2	36	61	3	64
Health	16	98	114	10	48	58	26	146	172
Science(Pure & Applied)	17	9	26	11	14	25	28	23	51
TOTAL:	734	541	1275	290	299	589	1024	840	1864



Programs and Courses Available in the External Mode

The units for each program and course which are available externally are listed. The availability of programs and courses, whether fully or partially, is also noted.



WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

AVAILABILITY

TECHNICAL EXTENSION SERVICE

Diploma in Building

Part

Communication 1

Building Construction Drawing 1

Building Science B

Builders' Bookkeeping and Costing

Quantities 1B

Building Construction 1B

Building Construction Drawing 2

Building Construction 2B

Quantities 2B

Building Organisation 1

Quantities 3B

Building Organisation 2

Work Study 1

Diploma and Certificate in Municipal Building Surveying (Under Review)

Communication 1

Building Construction 1B Building Construction 2B

Communication 2

Diploma and Certificate in Construction Estimating (Building) Part

Building Construction 1B Builders' Bookkeeping and Costing

Buildings Construction 2B

Quantities 1B

Communication 1

Quantities 2B

Quantities 3B

Diploma in Plumbing Design (Under Review)

Part

Communication 1

Building Construction 1B



Certificate in Building Construction (Under Review) Communication 1

Part

Building Construction 1B

Quantities 1B

Building Construction 2B

Quantities 2B

Builders' Bookeeping and Costing

Diploma, Clerk of Works

Part

Communication 1 Building Construction 1B Building Construction 2B Builders' Bookkeeping and Costing

Quantities 1B Quantities 2B

AGRICULTURE

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

Associate Diploma in Agriculture Associate Diploma in Equine Stud Management Bachelor of Business in Agriculture

Part Part Part

TECHNICAL EXTENSION SERVICE

Diploma in Agriculture (Under Review)

Diploma in Grain Management

Part

Cereal Chemistry Cereal Agronomy Export Practices 1 Grain Processing Export Law and Insurance

Certificate in Agriculture (Machinery and Construction)

Part

Communication A

Certificate in Agriculture (Woolclassing)

Part

Shearing Machinery Experting Communication A



Part

Part

Part

BEST COPY AVAILABLE

Certificate in Grain Husbandry

Communication A Grain Sampling Pest Control 1 Grain Storage

Supervision (Elements of)

Grain Handling Pest Control 2

Certificate in Agriculture (Sheep and Wool)

Shearing Machinery Experting

Communication A

Certificate in Agriculture Protection

Agricultural Protection A Legislation and Policies Declared Plant Control Declared Animal Control

Communication A
Extension Practice
Environmental Science 1
Environmental Managements

<u>ARTS</u>

MURDOCH UNIVERSITY

Comparative Literature (B.A.)
A dian Studies (1985) (B.A.)
Bachelor of Arts in Literature & Communication (B.Lit.)
Moster of Arts in Literature & Communication (M.A.)
Full

COMPARATIVE LITERATURE

H229 Theory of the Novel H233 Drama East & West

H237 Contemporary Studies in the

Nove1

H238 European Literature ε Social

Context

H280 Modern Poetry

H281 Drama Ritual & Magic

H282 Drama Society & Politics

H284 Australian Literature

H288 Principles of Comparative

Literature H289 Literary Theory

H290 Popular Literature

42/



AS	1.3H	STUDI	ES

AVAILABI	L	ΙTΥ
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Hat.		
H24	- ren erectatule & Elferary	
H25	Theory O Rural Society in Southeast Asia	
H25	l Southeast Asian Literature ε	
H254	Society 4 Southeast Asian Political	
	Economy	
H256	Perceptions of Southeast Asian Society	
H257		
- '	Southeast Asia	
H261	Malay/Indonesian II	
H266	Indonesian Religious History	
H267	Asian Mystical Movements	
H268	Revolutionary China	
H278	China Since the Cultural	
	Revolution	
H361	Malay/Indonesian III	
RACHE	TOP OF LITERATURE & COMMUNICATION	
DACHE	LOR OF LITERATURE & COMMUNICATION	
H402	Methods of Textual Analysis	
H403	a - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
	Comparative Drama Theory	
H412	Language as Ideology	
	, 3	
MASTE	RS IN LITERATURE & COMMUNICATION	
H501	Literary Structures	
H510	Author Study	
H511	Reading Television	
H513	Mass Communication Systems	
H514	Poetry & Poetics	
H515	Representation & Sexual	
	Differences	
Eronomic		
History	(B.A.)	Ful
Social &	Political Theory (including Honours) (B.A.)	Ful
Women's	Studies Inter-University Programme (1985) (B.A.)	Full Full
ECONO		
S25 8	Mineral Economics	
\$260	Macro-Economic Theory & Policy	
\$261	Business Enterprises, Markets	
	ε Consumers	
S263	Economic Development	
S265	Australian Economic History	
S267	Resource & Environmental	
	Economics REST COPY AVAILAB	ILE



S270 Australian Monetary & Fiscal AVAILABILITY Policy 5271 Theories of Capital Growth & Distribution \$273 Studies in Industrialisation \$274 Public Finance HISTORY \$238 Aboriginal History S257 Modern Russian History \$259 European Socialism & Revolution S275 Australian Social History I 5276 Social History of Modern Southeast Asia \$277 Australian Labour History 5278 Western Australia from 1829 \$279 Australian Social History II \$283 Australian Environmental History \$291 Economic History of Southeast Asia since 1500 \$293 European Social History 5298 Anglo-American Societies 1620-1815 SOCIAL & POLITICAL THEORY \$205 Philosophy of Social Sciences \$206 Environmental Ethics History of Modern Social & S2Q8 Political Theory S210 Resource Politics

S205 Philosophy of Social Sciences
 S206 Environmental Ethics
 S206 History of Modern Social & Political Theory
 S210 Resource Politics
 S239 Australia & Global Political Economy
 S256 Work in Industrial Society
 S296 Australian Society & Politics
 S299 Third World Transformation &

the International Order

WOMEN'S STUDIES (B.A.)

S215 Women, Capitalism & the Family H273 Women & Literature

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

Associate Diploma in Asian Languages

Part

Bachelor of Arts
Indonesian 101
Multicultural Issues 111
Multicultural Issues 112

Part



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AVAILABILITY
Associate Diploma in English
                                                                   Part
     Language, Literature & Culture 111
Bachelor of Arts (Literature Major only)
                                                                   Part
     Australian Studies 111
     Australian Studies 112
     Australian Studies 211
     Australian Studies 212
     Australian Studies 393-1 (XH)
     Australian Studies 393-2 (PW)
     Language, Literature & Culture 111
     Literature 211
     Literature 212
     Literature 213
     Literature 312
     Literature 393-04 (PW)
Bachelor of Arts (SOCIAL SCIENCES)
                                                                   Full
     Core Units
     Social Science 111
     Social Science 112
     Social Science 211
    Social Science 215
    Social Science 391
     Social Science 392
    Options
    Anthropology 111
    Anthropology 115
    Anthropology 215
    Anthropology 216
    Anthropology 218
    Anthropology 314
    Anthropology 315
    Anthropology 316
    Anthropology 318
    Geography 106
    Geography 111
    Geography 112
    Geography 211
    Geography 217
    Geography 311
    History 111
    History 112
    History 211
    History 216
    History 218
    History 311
    History 316
    Politics 111
    Politics 112
    Politics 215
    Politics 216
    Politics 221
    Politics 222
    Politics 311
    Politics 391
    Politics 513
   Sociology 121
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Sociology 122

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Sociology 211
                           Sociology 214
                           Sociology 311
                           Sociology 313
                           Sociology 314
                           Sociology 315
                           Sociology 316
                           Urban Studies 301
                          Welfare Practice 101
                          Welfare Practice 102
                          Welfare Practice 201
                          Welfare Practice 202
                          Welfare Practice 301
                          Welfare Practice 302
         Associate Diploma in Social Sciences
                                                                                                                                                                                                                    Full .
                          As above
      Bachelor of Applied Science (LIBRARY STUDIES)
                                                                                                                                                                                                                    Part
                       Bibliography Organisation 201
                       Librarianship Seminar 100
                       Library Materials 101
                       Library Materials 101
                       Library Skills 100
                       Library Studies 101
                      Library Studies 102
                      Resources for Children 300
                      Science & Society 101
                     Science & Society 102
                     Social Science 111
  Bachelor of Applied Science
                                                                                                                                                                                                                    Part
                   English 150
                  Psychology 113
                  Psychology 114
                  Sociology 121
                  Sociology 122
     WESTERN AUSTRALIAN COLLEGE OF ADVANCED EDUCATION
  ASSOCIATE DIPLOMA IN COMMUNITY LANGUAGE STUDIES
                                                                                                                                                                                                                   Full
Portuguese
Portuguese
Portuguese
Portuguese
Portuguese
Portuguese
Portuguese
Victnamese
Portuguese
Portuguese
Portuguese
Victnamese

  Linguistics 390
  Linguistics 391
  Interpreting and Translating 100: Principles and Practices of Interpreting and
```







AVAILABILITY

	AVAILABILITY
(Information Systems)	
(Local Government)	Full
(Marketing)	Full
(Personnel and Industrial Relations)	Full
(Public Administration)	Full
(Secretarial Administration	Full
(Valuation and Land Administration)	Full
Accounting 151	Full
Accounting 152	
Accounting 204	
Accounting 205	
Accounting 306 Accounting 307	
Accounting 307 Accounting 308	
Auditing 301	
Auditing 302	
Building 181	
Building 182	
Economics 151	
Economics 152	
Economics (Industrial) 201	
Economics (Macro) 202	
Economics (International) 311	
Economics 312	
Finance (Introductory) 201	
Finance (Managerial) 212	
Finance (Public) 303 Industrial Relations 212	
Industrial Relations 301	
Law (Business) 151	
Law (Contract) 152	
Law (Secretarial) 201	
Law 202	
Law (Corporation) 224	
Law 302	
Law 350	
Local Government 202	
Management Principles 151 Management Processes 152	
Marketing Management 211	
Office Administration 200	
Personnel 201	
Politics (Aust.) 215	
Politics (Comparative) 216	•
Public Administration 201	
Quantitative Methods 151	
Quantitative Methods 152 Taxation 303	
Taxation 304	
Valuation 121	
Valuation 122	
Valuation 201	
Valuation 202	
Valuation 301	
Urban Studies 301	



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Graduate Diploma in Business and Administration & Master of Business
Part
   (Business Management)
                                                                   Full
   (Education Administration)
                                                                   Full
   (Financial Management and Economics)
                                                                   Part
   (Public Administration)
                                                                   Part
       Accounting 509
       Accounting 511
       Administration (Ed) 541
       Administration (Ed) 542
       Administration (Ed) 544
       Administration (Public) 503
       Administrative Leadership 505
       Business Policy 511
       Comparative (Ed) 543
       Economics 509
       Economics 511
       Finance 509
       Industrial Relations 501
       Industrial Relations 502
       Law 501
      Law 509
      Law (Administration) 522
      Management 599
      Management Project 590
      Marketing 503
      Marketing 504
      Organisations 509
      Personnel 501
      Personnel 502
      Quantitative Methods 509
Valuation
Associate Diploma in Valuation
                                                                  Full.
     Accounting 151
     Building 181
     Building 182
     Economics (Macro) 152
     Law 151
     Law 152
     Management Principles 151
     Quantitative Methods 151
     Quantitative Methods 152
     Valuation 121
     Valuation 122
     Valuation 201
     Valuation 202
     Valuation 301
Bachelor of Business (Valuation and Land Administration)
                                                                  Part
     As above plus
     Economics (Micro) 151
     Management Processes 152
     Urban Studies 301
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AVAILABILITY

Full

Part

Diploma and Certificate in Accounting Full. Accounting 1A Accounting 18 Communication 1 Business Maths and Stats 1 Social and Economic Structure Business Law 1 Accounting 2A Accounting 2B Business Law 2 Business Maths and Stats 2 Economics 1 Business Computer Systems A & B Accounting 3A Accounting 3B Taxation Law and Practice A Taxation Law and Practice B Accounting Administration Accounting Controls Costing Procedures A Costing Procedures B

Diplowa in Banking and Finance
Communication 1
Accounting 1A
Accounting 1B
Communication 2
Accounting 2A
Accounting 2B
Business Law 1
Economics 1
Banking Practice

Business Law 2
Economics 2G
Costing Procedures A
Costing Procedures B

Accounting 3A Accounting 3B

Lending and Securities

Diploma in Business Administration

Business Procedures 1 Communication

Accounting 1A Accounting 1B

Social and Economics Structure

Business Maths and Stats 1

Business Law

Business Maths and Stats 2

Business Computer Systems A and B

Economics 1

Psychology 1 Personnel Techniques

Transport Law



Diploma in Local Government (Treasurer)

Accounting Systems Communication 1

Commercial Law C Accounting 2A

Accounting 2B Economics 1



Full

AVAILABILITY

Local Government Law 1
Local Government Law 2
Local Government Accounts
Municipal Practice A - Part 2
Statistics
Costing Procedures A
Costing Procedures B
Business Computer Systems A & B

Part

Diploma in Commercial Studies Communication 1 Communication 10 Typing 1 Typing 2 Bookkeeping (Day Commercial) Receptionist Function Typing 3 Communication 2 Typing Secretarial Secretarial Administration Accounting 1A Accounting 1B Accountancy Audio Typing 1 Bookkeeping (Day Commercial) Bookkeeping (General) Commercial Calculations Accounting 2A Accounting 2B Audio Typing 2 Data Processing B Economics 1 Financial Management 1 Meetings Procedure - Companies Organisation 1A

Part

Shorthand Speed 50-80 wpm Stenography 1 Communication 1C Communication 1 Shorthand Speed 100 wpm Typing Secretarial Audio Typing 1 Stenography 2 Office Practice 2 Audio Typing 2 Stenography Communication 2 Secretarial Administration Financial Management 1 Economics 1 Meetings Procedure - Companies

Organisation Theory 1A Organisation Theory 1B

Organisation 1B

Typing 3

Diploma in Secretarial Studies



AVAILABILITY Diploma and Certificate in Advertising Part Communication 1 Legal Principles Economics 1 Psychology Státistics Financial Management Marketing Management 1 Organisation Theory Market Research Marketing Management 2A Public Relations Diploma and Certificate in Real Estate Management Part Communication 1 Real Estate Practice 1 Real Estate Accounting Real Estate Law 1 Real Estate Valuation 1 Building Construction 1R Real Estate Practice 2 Real Estate Law 2 Real Estate Valuation 2 Real Estate Financial Management Real Estate Law 3 Regional Planning Economics 1 Diploma and Certificate in Automotive Engineering Management Part Supervision (Elements of) Communication 1 Legal Principles Economics 1 Psychology Public Relations Financial Management Industrial Relations Power Hydraulics 1 Office Organisation Financial Management (Advanced) Diplowa and Certificate in Fire Engineering Management Part Communication 1 Economics Psychology 1 Personnel Techniques Industrial Relations Organisation Theory Public Relations Psychology 2B Diploma in Hospital Administration Part Communication 1 Accounting 1A Accounting 1B Social and Economic Structure Work Study 1 Commercial Law C Hospital Law A Psychology 1





Accounting 2A
Accounting 2B
Economics 2G
Business Law |
Work Study |
Instructional Techniques
Industrial Law |



AVAILABILITY Diploma and Certificate in Supply Management Part Communication 1 Legal Principles Supervision, Elements of Work Study 1 Economics 1 Psychology 1 Financial Management Statistics Organisation Theory Office Organisation Data Processing A Financial Management (Advanced) Industrial Relations Transport Economics Personnel Management Diploma and Certificate in Transport Management Part Communication 1 Accounting Systems Statistics Financial Management 1 Economics 1 Organisation Theory Financial Management 2 Warehouse Management Salesmanship Diploma and Certificate in Work Study Part Statistics Work Study 1 Communication 1 Economics 1 Legal Principles Psychology 1 Office Organisation Financial Management 1 Industrial Relations Psychology 2B Organisation Theory Data Processing A Production Organisation Diplowa in Marketing Part Certificate in Sales Supervision Communication 1 Salesmanship Legal Principles Accounting Systems Sales Supervision Economics 1 Psychology 1 Marketing Management 1 Statistics Market Research BEST COPY AVAILABLE Financial Management 1 Marketing Management 2A Organisation Theory



	AVAILABILITY
Certificate in Credit Management Accounting 1A Accounting 1B Communication 1 Commercial Law C Economics 1	Part
Certificate in Commercial Studies Certificate in Commercial Studies (Part-Time) Communication 1C Communication 1 Typing 1 Audio Typing 1 Typing 2 Office Practice 1 Typing 3 Commercial Calculations Bookkeeping (Day Commercial) Bookkeeping (General) Audio Typing 1	Part
Certificate in Secretarial Practice Certificate in Secretarial Practice (Part-Time) Typing Secretarial Audio Typing 2 Office Practice 2 Shorthand Speed Stenography 2 Accounting 1A Accounting 1B	Part
Certificate in Exporting (Under Review) Export Law and Insurance Export Practice 1 Economics 1 Export Marketing 1 Export Marketing 2 Export Practice 2 International Economics	Full
Certificate in Functional Management (Finance) Statistics Economics 1 Psychology 1 Communication 1 Organisation Theory Financial Management (Advanced) Legal Principles	Ful l
Certificate in Functional Management (Office) Statistics Economics Psychology Communication Organisation Theory Work Study Office Organisation Financial Management	Full



Certificate in Functional Management (Production) Statistics Economics Psychology Communication Organisational Theory Work Study	AVAILABILITY Part
Certificate in Functional Management (Retail) Statistics Economics 1 Psychology 1 Communication 1 Organisation Theory Work Study 1	Part
Certificate in Functional Management (Supply) Statistics Economics Psychology Communication Organisation Theory Legal Principles	Part
Certificate in Retail Management Communication 1 Supervision, Elements of Financial Management 1	Part
Certificate in Travel Operation (Under Review) Communication 1	Part
Certificate in Employment Consulting Communication 1 Business Procedures 1 Personnel Techniques Techniques of Selection	Part



EDUCATION

MURDOCH UNIVERSITY

AVAILABILITY

Primary Teacher Education (B.A.)

Secondary & Post-Secondary Education (B.A./Dip.Ed; B.Sc/Dip.Ed.)

Diploma in Education (Dip. Ed.)

Bachelor of Education (B.Ed.)

Education Studies (B.A.)

Diploma in Education Studies (Dip. Ed. St.)

Attendance requirements

Attendance requirements

Full

Full

Full

E210 Education Studies Project E221 Education in Context E222 Australian Education E223 Philosophy of Education E224 Sociology of Education E241 Processes of Learning E242 Educational Psychology E244 Educational Measurement E272 English & the Curriculum E273 Social Studies ε the Curriculum E274 Science & the Curriculum E275 Mathematics ε the Curriculum E277 Diagnostic Teaching E282 English & the Primary Curriculum E283 Social Studies & the Primary Curriculum E284 Science & the Primary Curriculum E285 Mathematics & the Primary Curriculum E402 Curriculum Processes & Issues E403 Religious Education E422 National Education Policy δ Administration E423 Knowledge Persons & Education E424 Sociological Perspectives on Education E426 Contemporary Educational Thought E434 Education Cross Cultural Perspective E441 Advanced Educational Psychology I E442 Advanced Educational Psychology II E444 Advanced Educational Measurement E446 Adult Cognition, Development & Education E466 Mathematics Education E471 Classroom Research Project E455 Advanced Social Research Methods in Education A222 Social Research Methods



Mathematics Education Project 591 Mathematics Education project 592

Science Education 513 - Trends Science Education Project 591 Science Education Project 592

Physics Education 508



Science & Mathematics Education 501 - Foundation Issues Science & Mathematics Education 502 - Research & Evaluation

Master of Applied Science (Science Education)

Full

Mathematics Education Seminar 614 Mathematics Education Seminar 615

Mathematics Education Thesis Preparation 1/699 Mathematics Education Thesis Preparation 2/699

Science Education Seminar 614 Science Education Seminar 615

Science Education Thesis Preparation 1/699 Science Education Thesis Preparation 2/699

WESTERN AUSTRALIAN COLLEGE OF ADVANCED EDUCATION

DIPLOMA OF TEACHING (CONVERSION)

Full

Developmental Psychology 352 Educational Measurement & Evaluation 353 Behaviour Modification 360 Educational Theory 355 Science Education 200 Mathematics Education 200 Mathematics Education 201 Language Arts (ECE) 301 Language Arts (ECE) 302 New Trends in Language Arts 262 Curriculum Studies in Physical Education Migrant Education 391 Aboriginal Education 390 Religious Education 208 Mathematics Education 382 Perspectives on Art in Education and Contemporary Art 350 Historical Geography of Early 19th Century W.A. 278 * Environment and Society 214 ** Urban Australia 210 Western Music 305 Biology 391 ## Human Biology 2240 ## Statistics 310## Children's Literature 254 • Linguistics 390 Linguistics 391 Theatre History 390 . Religious Studies 201 # Religious Studies 203 # R. ligious Studies 311 # Religious Studies 312 #

BACHELOR OF EDUCATION

Full

COMPULSORY UNITS Curriculum Theory and Practice Evaluation of Teaching and Learning

EDUCATION STUDIES STRAND (6 units)

Areas of Concentration

(i) Teaching Children with Special Needs (Special Education) Spec. Ed. 584 Behaviour Management

Spec. Ed. 593 Reading Spec. Ed. 592 Social Skills

Spec. Ed. 594 Mathematics Spec. Ed. 580 Foundation Studies 1 Education 448 Remedial Education I Education 449 Remedial Education II



Full.

(ii) Religious Education

Compulsory unit - Studies in Religion 417 Religion, Society and Education

At least two (2) units from -

Studies in Religion 414 Hinduism and Buddhism Studies in Religion 415 Judaism and Islam Studies in Religion 411 Old Testament

Studies in Religion 412 New Testament: The Gospels

Catholic Studies 412 Revelation and Christology
Catholic Studies 422 Sacraments and Christian Worship

At least two (2) units from

Religious Education 41! Curriculum Development in Religious Education

Catholic Education 421 Curriculum Design in Religious Education Educational Psychology 443 Human Relationship and Values Education

A further unit from any of the above listed units.

(iii) Multicultural Education

A choice of between 2 to 4 units from each of sections (A) and (B) identified below to make up a total of 6 units in this concentration.

Education 458 Aboriginal and Migrant Education

Intercultural Education 590 Comparative Ethnic Education Migrant Education 591 Developments in Migrant Education

Aboriginal Education 591 Developments in Aboriginal Education

Language Education 593 Teaching English as a Second Language

Aboriginal Studies 591 Traditional Aboriginal Society

Aboriginal Studies 593 Aborigines and Social Change

Migrant Studies 591 Australian Immigration Policies and Perspectives Migrant Studies 591 Australian Immigration: Policies and Pers Migrant Studies 593 Migrant Communities Intercultural Studies 590 Cross Cultural Perspectives Intercultural Studies 591 Cross Cultural Communication Linguistics 590 Intercultural Linguistics Linguistics 591 Australian Aboriginal Linguistics Linguistics 591 Australian Aboriginal Linguistics Aboriginal Studies 480 Remote Aboriginal Communities Aboriginal Studies 482 Aborigines of the South West of W.A. Aboriginal Studies 484 Aboriginal History Aboriginal Studies 486 Aboriginal Languages

Aboriginal Studies 486 Aboriginal Languages
Migrant Studies 480 Sociocultural Background of Migrants Migrant Studies 482 Migrant Children and their Families

Migrant Studies 484 Language Issues Migrant Studies 486 Identity in a Multi-cultural Society

(iv) Contextual Studies

Education 4626 Issues in Australian Education

Education 4628 Sociology of the School Education 440 Philosophy of Education 11

Education 442 Studies in Education Policy and Decision Making II

Education 443 Studies in Education Policy and Decision Making III Education 446 Sociological Perspectives of Educational Change

CURRICULUM/GENERAL STUDIES STRAND (6 units)

Students must undertake 6 units in a curriculum/general studies concentration in the pattern of between 2 and 4 units from each area to meet the requisite total number of units

(i) Social Science Education

Full

Full.

Curriculum Studies 484 Social Science

Education 458 Aboriginal and Migrant Education

Aboriginal Education 591 Developments in Aboriginal Education Migrant Education 591 Developments in Migrant Education Intercultural Education 590 Comparative Ethnic Education

Social Science 470 History of Western Australia

Social Science 472 Environmental Policy

Social Science 475 The Australian City

History 3500 Contemporary History History 3600 Contemporary History

Anthropology 2100 Introductory Anthropology

Aboriginal Studies 591 Traditional Aboriginal Society Aboriginal Studies 593 Aborigines and Social Change

Migrant Studies 591 Australian Immigration: Policies and Perspectives Migrant Studies 593 Migrant Communities

Intercultural Studies 590 Cross Cultural Perspectives Intercultural Studies 591 Cross Cultural Communication

At. riginal Studies 480 Remote Aboriginal Communities

Aboriginal Studies 484 Aboriginal History

Aboriginal Studies 482 Aborigines of the South West of W A

Migrant Studies 480 Sociocultural Background of Migrants

Migrant Studies 486 Identity in a Multi-cultural Society Migrant Studies 482 Migrant Children and their Families



	AVAILABILITY
(ii) Physical and Health Education	Full
Curriculum Curriculum Studies 486 Physical and Health Education Physical Education 492 Health Physical Education 562 Curriculum Studies Prac. I Physical Education 567 Curriculum Studies Prac. II Physical Education 568 Health and the Primary School Child Physical and Health Education 4100 Community Recreation Physical and Health Education 4155 Current Issues in Physical and Health Education	
General Physical Education 560 Applied Kinesiology * Physical Education 566 Sociology of Sport and Leisure Physical Education 564 Paediatric Work Physiology Physical Education 482 Acquisition of Skills * Physical and Health Education 4114 Environmental Health Physical Health Education 4402 Health Care Systems in Australia Physical Education 5"2 Sports Medicine * These units are mutually exclusive	
(iii) Science Education	Attendance Requirements
Curriculum Curriculum Studies 481 Science (Further units will become available in 1985)	noquit elleres
General Environmental Science 480 Ecology Environmental Science 482 Pollution Human Biology 2240 (Further units will become available in 1985)	
(iv) Art	Full
Curriculum Art 4155 Current Issues in Art Education * Art 4156 Research in Art Education * Art 482 Approaches to Children's Art	, 4, 1
General Art 480 Core Ideas in 19th and 20th Century Art Art 486 A Perspective on Australian Art Education 464 Education, Culture and Art Art 1211 Art History Art 4701 Further Studies in an Art Field # Craft 4701 Further Studies in a Craft Field #	
To undertake these units students must have studied Art at 3rd Year level. To undertake these units students must have studied Art or Craft at the 3rd Year level. #	
(v) Mathematics Education	Full
Curriculum Mathematics Education 382 History of Mathematics Curriculum Studies 483 Mathematics	
General Mathematics 480 Geometry Mathematics 484 Applied Algebra Mathematics 4101 Transformational Geometry * Mathematics 4104 Operational Research * Mathematics 4280 Numerical Analysis *	
These subjects are restricted to students who have a background of teaching at the secondary level.	
(vi) Communications Education Reading	Full
Curriculum Reading Education 445 Teaching Reading as a Language Process 1 Reading Education 447 Remediation in Reading Reading Education 554 Teaching Reading as a Laaiguage Process Prac. II Reading Education 555 Reading Workshop and Core Studies Reading Education 556 Teaching Reading as a Language Process Prac. III Reading Education 557 Reading - Language Investigation: Action Research	
General Reading Education 444 Reading and Learning to Read Reading Education 446 The Study and Evaluation of Reading - Language Performance	
Reading Education 448 An Analysis and Evaluation of Current Reading Materials	
Reading Education 449 Language. Thought and Reading	



English (Secondary)

Curriculum

English 4155 Current Issues in English Teaching English 4301 Advanced Language and Learning English 4156 Research in English Teaching English 4401 Advanced Language and Learning

General

English 4"00 Research and Thesis in Literature English 4800 Research and Thesis in Literature English 4708 Advanced Writing English 4808 Advanced Writing

Teaching English as a Second Language Curriculum

Language Education 587 Media in Language Teaching Language Education 591 Language in Learning

Language Education 585 Principles of Second Language Teaching Language Education 586 Advanced Methodology in TESL

Language Education 593 Teaching English as a Second Language

General

Language 480 Our Changing Language OR Language Studies 580 English and the Study of Language Language 482 Language in Society

OR

Language Studies 585 Language Variation and Australian Society

Language Studies 581 Language Study and Classroom Applications Language Studies 583 Language Acquisition and Development

Language 498 Dialects and English

Modern/Community Language Teaching Curriculum

Language Education 587 Media in Language Teaching Language Education 588 Precedents and Policies in Modern Language

Language Education 585 Principles of Second Language Teaching Language Education 589 Modern/Community Languages in a Primary

Language Education 590 Advanced Methodology in Modern Languages

Genera!

As for TESL stream above.

Language Arts Education

Curriculum Studies 489 Curriculum Studies in English Language Education 580 Precedents and Policies in Language Arts Language Education 584 Literacy and Oracy

Language Education 581 Advanced Methodology in Language Arts

Language Education 591 Language in Learning

Early Childhood Education 440 Listening and Talking in the Junior Primary Classroom Early Childhood Education 441 Reading and Writing in the Junior Primary Classroom

General

Language Studies 582 Language Study and Classroom Applications

Literature 480 European Drama 1870-1970 Literature 482 19th and 20th Century American Fiction

Literature 483 Short Fiction

Literature 484 Children and Fiction

Language Studies 584 Children's Literature Language 480 Our Changing Language OR Language Studies 580 English and the Study of Language Language 482 Language in Society



AVAILABILITY

OR Language Studies 585 Language Variation and Australian Society

Language Studies 581 Language Study and Classroom Application Language Studies 583 Language Acquisition and Development

Language 498 Dialects and English

ENGINEERING

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

Bachelor of Applied Science (ENGINEERING)

Part

Bachelor of Applied Science (SURVEYING)

Part

Calculus of Observations 281 Calculus of Observations 282

Cartography 181

Cartography 182

Computation 181

Computation 182

Computation 281

Computation 282

English 150

Geography 111

Geography 112

Mathematics 101 Mathematics 102

Surveying 181

Surveying 182

TECHNICAL EXTENSION SERVICE

Certificate in Automotive Engineering

Part

Automotive Science Automotive Power 1 Automotive Traction Power Hydraulics 1 Automotive Dresel 1 Work Study 1



AVAILABILITY Diploma in Cartography Certificate in Cartography Part Photogrammetry 1 (new) Cartographic Drafting Communication 1 Computer Techniques 1 Mathematics 1F Principles of Cartography Surveying 1 Survey Computations 1 Geological Mapping Survey Computations 2 Geological Mapping Survey Computations 2 Photogrammetry 2 (new) Laws and Regulations (Surveying) Computer Techniques Diploma in Civil Engineering Part Drawing 1 Engineering Mathematics 1 Engineering Communication 1 Mathematics 2 Engineering Materials 1 Hydraulics 1 Soil Mechanics Design (steel) Roads and Railways Water supply and Waste Disposal Bridges Diploma in Engineering Surveying Part Mathematics 1F Qualifying Mathematics Communication 1 Principles of Cartography Calculating Processes Mathematics 2F Mathematics 1D Survey Computation 1 Mathematics 2D (Surveying) Survey Computations 2D Surveying 2D Land Assessment Surveying 3D Photogrammetry 1 (old) Diploma in Mine Surveying Part Qualifying Mathematics D Mathematics 1F Communication 1 Principles of Cartography Computer Techniques 1 Mathematics 2F Mathematics 1D Survey Computations 1 Surveyinging 1 Mathematics 2D (Surveying) Survey Computations 2





Applied Survey Maths Photogrammetry 1A Engineering Geology



AVAILABILITY Electrotechnology 1 Building Construction 1B Refrigeration and Air Conditioning Plant 1A Applied Mechanics 2 Heat Engines 2 Certificate in Industrial Electronics Part Electrical 10 Electronics 10 Electronics 20 Communication 1 Electronic Systems 1 Certificate in Mineral Processing Part Communication 1 Mathematics 1F Physics 1 Chemistry 1 Computer Techniques 1 Certificate in Seamanship (Fishing) Certificate in Town Planning Deafting Certificate in Media Electronics Part Electrical 10 Electronics 10 Communication 1 Certificate in Electrical Draftmanship Part Communication 1 Electrical Engineering 1D Electronics 1D Electrical Design 1 Certificate in Electrical Engineering Part Communications 1 Electrical Engineering 1D Electronics 1D Electrical Design 1 Certificate in Electronic Engineering Part Communication 1 Electrical Engineering 1D Certificate in Industrial Electronics Part Electrical 10 Electronics 10 Electronics 20 Communication 1 Electronic Systems 1 Certificate in Automotive Engineering Part Automotive Science Automotive Power 1 Automotive Traction Power Hydraulics 1 Automotive Diesel 1 Work Study 1



Certificate in Plumbing (Under Review)

Communication 1

Builders Bookkeeping and Costing
Building Construction 1B

Certificate in Sheet Metal Work (Under Review)

Drawing 1C (Engineering)

Communication 1

Work Study 1

Certificate in Refrigeration and
Air Conditioning (Under Review)

Supervision (Elements of)

Business Practice

Communication 1

HEALTH

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

Bachelor of Applied Science Human Biology 184 Statistics 121	Part
Diploma of Applied Science Human Biology 181 Human Biology 182	Part
Bachelor of Applied Science (Clinical Nursing Stream) (Nursing Administration Stream) (Nursing Education Stream) (Primary Health Care Stream) Biological Science 261 Biological Science 252 Education 330 Analysis of Teaching Education 420 Strategies of Teaching Human Biology 181 Human Biology 182 Management Principles 151 Management Processes 152 Nursing Studies 261 Nursing Studies 262 Organisations 301	Part



Graduate Diploma in Occupational Safety and Health Epidemiology 581 Health & Safety Law & Management 582 Issues in Health & Safety 583 Occupational Health & Safety 581 Occupational Safety & Health Project 590 Occupational Safety & Health Project 591 Occupational Safety & Health Specialisation 591 Occupational Safety & Health Specialisation 592 Occupational Safety & Health Specialisation 593 Occupational Safety & Health Specialisation 593 Occupational Safety & Health Specialisation 594 Safety Technology 582 Taxicological Principles 582



ASSOCIATE DIPLOMA IN HEALTH EDUCATION

Full

Foundation Studies (5 units)

Human Development 111 Child Development Human Development 121 Life Span Psychology Adolescence to Old Age

Sociology

111 Society and People 222 Contemporary Australian Society Socialogy

Sociology 223 Sociology of Health

Professional Studies (6 units)
Health Education 111 Introduction to Health Education Health Education 121 Current Issues in Health Education 222 Mental Health

Health Education

Health Education 231 Community Organisation and Community

Development

Health Studies 111 Health Education within the Health Care

System

Health Studies 221 Epidemiology and Biostatistics

Communication and Teaching Studies (3 units)

Communication Communication 111 Communication in Health Education Communication 221 Mass Communication Theory and Practice Teaching Workshop 211 Teaching Strategies

Field Studies and Practice (2 units)

Health Education 241 Field Study Project Health Education 242 Health Education Practice

Diploma in Environmental Health

Sociology and Economics Building Construction 1B Community health Communication 1 Environmental Health 1 Principles of Public Health Building Construction 2B Environmental Health 2 Environmental Science Meat Inspection 1 Meat Inspection 2

Part



LAW

TECHNICAL EXTENSION SERVICE

Certificate in Industrial Advocacy Communication | Industrial Law | Statistics Economics |

Part

Financial Management 1 Industrial Relations

Diploma and Certificate in Legal Studies

Part

Communication 1
Legal Principles
Law of Contract
Practice and Procedure 1
Law of Torts 1
Administrative Law 1
Taxation Law and Practice A
Taxation Law and Practice B
Industrial Law 1



SCIENCE (PURE AND APPLIED)

MURDOCH UNIVERSITY

Environmental Science (B.Sc.)
Population & World Resources (B.A./B.Sc.)
Diploma in Community Science (Dip. Comm. Sc.)
Diploma in Environmental Science (Dip. Env. Sc.)

AVAILABILITY

Attendance requirements
Full
Attendance requirements

ENVIRONMENTAL SCIENCE

N211 Waste Treatment & Recycling
N213 Climate, Weather & Man
N214 Mapping & Cartography
N217 Air Pollution Meteorology
N218 Environmental Biology
N222 Pollutants & Toxicology
N279 Community Ecology | not available
N281 Population Ecology | after 1985
N2.. Ecology
N2.. Ecological Principles

POPULATION & WORLD RESOURCES

N212 Population, Resources & Environment

N225 Population & World Resources
Project
N404 Community Science Project

OTHER COURSES

A203 Science Technology & Society A208 Engineering Mathematics

Computer Science (1985) (B.Sc.)
Mathematics (including Honours) (B.A./B.Sc.)
Mineral Science (Extractive Metallurgy) (B.Sc.)
Physics (B.Sc.)
Diploma in Applicable Mathematics (Dip. App. Maths)
Diploma in Computer Science (1985) (Dip.Comp.Sc.)

Development from 1985
Full
Full
Full
Full
Full
Development from 1985

BEST COPY AVAILABLE

SCHOOL OF MATHEMATICAL & PHYSICAL SCIENCES

M215 Applied Statistics

M261 Mathematical Methods M263 Complex Variable M268 Statistical Analysis

M2/2 Operations Research Techniques

M273 Vector Spaces M276 Matrix & Computational Methods



M362 General Analysis M365 Algebraic Structures M367 Numerical Analysis M369 Differential Equations

PHYSICS

M205 Measurement Science
M220 Waves
M221 Electronics
M222 Interactions & Fields
M311 Quantum Theory
M312 Solid & Surface Physics

COMPUTER SCIENCE (and Diploma in Computer Studies)

M214 Computer Science

M313 Systems Programming M4.. Computer Studies Project

MINERAL SCIENCE

M201 Thermodynamics
M202 Properties of Matter
M234 Resources Recycling
M237 Chemistry IIA
M240 Analytical Chemistry
M256 Mineralogy
M355 Processes of Extractive
Metallurgy
M357 Mineral Chemistry (Hydrometallurgy)
M358 Pyrometallurgical Processes
M254 Mineral & Energy Resources

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

Bachelor of Applied Science (BIOLOGY)

Animal Biology 201

Animal Biology 202

Biology 101

Biology 102

Plant Biology 201

Plant Biology 202

Statistics 211





AVAILABILITY

Bachelor of Applied Science (PHYSICS)

Chemistry 101

Chemistry 102 English 150

Mathematics 101

Mathematics 101

Mathematics 201

Physics 101

Physics 102

Weather Forecasting 101

Part

TECHNICAL EXTENSION SERVICE

Diploma in Mathematics

Part

Mathematics 1F

Qualifying Mathematics D

Mathematics 1D

Mathematics 2F

Mathematics 2S Mathematics 3S

Applied Mathematics 2S

Certificate in Laboratory Practices (Biological Sciences)
Certificate in Laboratory Practices (Physical Sciences)

Part Part

Biology 1

Chemistry 1

Laboratory Procedures

Physics 1

Laboratory Workshop

Laboratory Techniques 2B Laboratory Techniques 2A

Chemistry

OTHER

MURDOCH UNIVERSITY

(B.A./B.Sc.)

Full



Parit 1	Courses	(ATI	Courses	available	1984	ડ	1985)
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Prerequisite for Programmes available externally

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A103	Energy & Life Systems	
· 6105	, v = v = v = v = v = v = v = v = v = v	(Starting students
AIGE	i = i i i i i i i i i i i i i i i i i i) Trunk Courses must take one of
,	Australian Studies) these 3 courses)
*4. * *		these 3 courses)
21/12	The same of activation bases of Physical	(General Studies)
	ocience inot available after 1985)	(deneral Studies)
101	Ptolemy to Neuton (not available after 1984)	10
	1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	(General Studies)
MIGG	Introduction to Mathematics	
4161	Principle of Mail	
1.51	Principles of Mathematics	(Environmental Science)
		(Mathematics Charines W:
		(Mathematics, Chemistry, Mineral
M162	Principles of Computer Programming	(Science, Physics)
		(Mathematics, Computing (1985),
4172	Particles in Motion	Physics)
4162	Cultural Mathematics	(Physics, Chemistry, Env. Science)
4131	Cuttura: Mathematics	(Primary Teaching)
-	Extractive Metallurgy	(Mineral Science)
4130	Geological Processes	(Mineral Science)
CEIM	Introduction to Statistics	(Mineral Science)
M183	Statistical Methods	(Population & World Resources)
	, , , , , , , , , , , , , , , , , , ,	(Mathematics, Population & World
#141	Principle (o)	Resources)
	Principles of Chemistry	(Chemistry, Mineral Science)
		(anamaci), illieral Science)
н144	Foundations of Southeast Asian Society	(Asian Shuding (100=))
H174	Language & Literature	(Asian Studies (1985))
H165	Reading Italian IA	
H102	Foundation of Comment	
4140	Foundations of Communication Studies	
	Introduction to Contemporary China	(Asian Studies (1985))
H121	Introduction to Literary Studies	(Comparative Live
H103	Introduction to the Study of Language	(Comparative Literature)
H161	Malay/Indonesiar I	(Primary Teaching)
H170	Reading Italian IB	(Asian Studies)
	5 · · · · · · · · · · · · · · · · · · ·	
5141	Introduction to Psychology	
	The to a sychology	(Primary Teaching, Secondary Teaching,
\$161		Education Studies)
3101	Introduction to Economics	(Economics, Population & World
		Possures, robutation & World
1818	Introduction to History	Resources)
S131	Introduction to Social & Political Theory	(History)
S162	Australian Economic Institutions	(S.A.P.T.)
5101	Foundations of Co. 1.1.	
\$133	Foundations of Social Inquiry	(S.A.P.T.)
((1	Introduction to Australian Political	, , , , , , , , , , , , , , , , , , , ,
	Institutions	(S.A.P.T.)
5106	Introduction to Philosophy	
5182	Turning Points in History	(S.A.P.T.) ~
	The first of y	(History)
1160	Multi-Arts & the Dat	
	Multi-Arts & the Primary Curriculum	(Primary Teaching)
4105	lata I i i	,
♥ 1 . J _	Introduction to Environmental Science	(Environmental Saigner Dec.)
		(Environmental Science, Population &
		World Resources, General Studies)
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	· · · · · · · · ·	(S.A.P.T., Women's Studies)
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*!	ntrials fion to Teaching - not offered externall	Ly but and the t
,	The Francisco	y but available as 4-week intensive
		Primary leaching; Secondary
<i>(</i> 2)		Teaching; Dip. Ed.)
EDIC.		· ,
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TECHNICAL EXTENSION SERVICE

AVAILABILITY

Full

Certificate in Building Foremanship Building Construction 'B

Quantities 1B

Building Construction 2B

Building Construction Drawing 2

Building Organisation 1 Supervision (Elements of)

Certificate in Furniture Production

Communication 1
Supervision (Elements of

Builders' Bookkeeping and Costing Work Study 1 Part

